

THE DEFENSE OF THE MEXICAN REPUBLIC AGAINST THE POSSIBLE INVASION OF CHOLERA

EDUARDO LICEAGA, M. D.

Mexico City, Mexico

Read before the American Public Health Association, Havana Cuba, December, 1911

In order to demonstrate to the public authorities that the measures proposed to safeguard the Mexican Republic against the possible invasion of cholera, were based on exact scientific data the Mexican Board of Health issued two pamphlets in which was stated the general well recognized facts concerning the disease and the manner in which it is spread.

I will not weary you with reading these pamphlets. One was intended to give every individual, every family or small group, a knowledge of the germ of the disease, of the way in which it can enter the system, of the way in which it issued from the same, and inculcate the fundamental idea that the excreta is what contains that germ, and that the most certain way to prevent any attack by the disease, is to disinfect with the greatest care, the vomit and dejecta of the patient; to avoid carrying to the mouth any article that can in any way have been contaminated by that germ, and to warn everybody against the danger of introducing the germ of the disease into the system by means of contaminated water. The other pamphlet is called "Recommendations to the Municipal Councils of the Republic, and specially to those of the Cities on the United States frontier, or of the ports on the Gulf of Mexico," and is intended to instruct those communities on the measures which they ought to take to protect themselves from cholera.

The same knowledge of bacteriology has served as a basis for the instructions given to the Delegates and communicated to the State Governments, the Political Chiefs, and the Mayors of Municipalities.

The instructions issued by the Board form three principal groups as follows:

I. Those which are intended to prevent the disease reaching us from the points in which it now exists;

II. So that if those measures are not sufficiently efficacious, each community may have the resources necessary to defend itself from an epidemic, and

III. So that these resources may also be within the reach of small groups, even the family and the individual, in order that they may all be able to defend themselves from disease.

This is the order in which I propose to explain the measures which have been adopted.

The measures which are intended to protect the nation as a whole, are those which pertain to the International Sanitary Police and of these the following have been adopted:

As it is impossible to establish either Sanitary Stations or Lazarettos, equipped with the buildings and a sufficient staff to make a defense against cholera in all the ports of the Republic, by special Decree of the Executive, the Ports of Tampico, Veracruz and Progreso on the Gulf Coast, have been selected to receive passengers and cargo from the foreign countries which have been invaded by cholera, and the Port of Coatzacoalcas, to receive only the cargo, in order not to disturb the interoceanic traffic over the isthmus of Tehuantepec. On the Pacific Coast, the Port of Salina Cruz is the one best equipped to receive passengers and cargo from the Orient, where cholera prevails almost continuously. That port not only has a sanitary station and lazarette for the first and second class passengers, but also sheds with a capacity of 700 immigrants, where they can be kept under observation before allowing them to pass into the interior of the country. The introduction of immigrants exceeding ten in number is prohibited in the other Pacific ports, because up to that number, it is possible to submit them to the rules of the Sanitary Code.

As I have stated, the ports which are open to receive vessels from countries which are invaded by cholera, possess a sanitary station and lazarette with departments for the reception of the suspects, the confirmed cases and the convalescents. They are furnished with an equipment for the destruction of the dejecta before they are thrown into the sea, and are also provided with screened doors and windows, which will not allow the entrance of flies or mosquitoes into those places where sick or suspected persons are kept.

In order to give confidence to the employees who have to board the vessels arriving from infected parts, orders have been given for the propagation of anti-cholera vaccine amongst the sanitary agents, as well as those employed by the treasury, the longshoremen, consular agents and all other persons whose duties carry them on board the ships when they reach Mexican ports. As we do not have absolute confidence in these vaccines, orders have also been given, that all persons even though vaccinated, shall make no use of the water carried on board the ships, and they have been recommended to take all the precautions referred to in the "instructions."

In order to facilitate the rapid diagnosis of doubtful cases by the delegates in the ports, they have been furnished all the different resources taught by bacteriological science, for making a rapid discovery of the cholera germs. In those ports in which the staff is not sufficiently trained, they have been provided with sterilized vessels in which the excreta are

deposited for purposes of examination. Those from the Port of Progreso are examined in Merida, and those from Veracruz in the Bacteriological Laboratory of the Supreme Board of Health, and wooden vessels have been sent to them, which will permit the transportation of those matters without danger to the carriers or of the spread of the disease.

Instructions have been given to the delegates, besides those which are set forth in the Sanitary Code and Maritime Sanitary Regulations. These instructions have been worded in such a way as to utilize the present knowledge of science, and so discover the bacillus carriers by making an analysis of their excreta, and not to suspend their treatment as suspects of carrying such germs, until the bacteriological examinations, repeated during five consecutive days have demonstrated that they are no longer dangerous. As will be understood, the instructions vary according to the port which is open to traffic, as well as for Coatzacoalcos which can only receive cargo, and for the other coast ports which can receive neither passengers nor cargo.

In the frontier towns, provisional lazarettes have been established, and the sanitary inspectors of those localities, have also received instructions which amplify and complete those already contained in the Sanitary Code.

If, in spite of all these precautions, cholera should invade either the ports or frontier cities, the authorities of those places have a series of "Recommendations," which are intended to give general rules for each locality, whatever may be its condition and whatever may be the sanitary services already established, and these recommendations give all the information possible for preventing the propagation of the disease.

These recommendations have also been forwarded to the other Municipalities of the Republic, through the State Governments, in order that they may reprint them and distribute them throughout each State.

In order to furnish means of defense against cholera and place such means within the reach of social organizations, families and individuals, a large edition has been printed of the "Instructions for the defense against cholera, by each individual or family," and these have also been distributed through the State Governments with a request that they should order them reprinted if found suitable.

Both the "Recommendations" as well as the "Instructions," are based on our modern knowledge of cholera dissemination in order that everyone should know that these recommendations are made and based on scientific data.

In the defense which is being organized in the Capital of the Republic, an attempt is made to get all classes of society to contribute their efforts in preventing the arrival of the disease, and if in spite of all precautions it should appear, to contribute to prevent its propagation.

The Executive has been consulted as to the advisability of securing the

rapid extinction of the epidemic of typhus, both because it will be more easy to fight a single epidemic, as well as because, all the measures which may be adopted for the suppression of typhus, will redound to the advantages of those which may be taken for the defense against cholera.

As is natural, the Board which is directly charged with the care of the public health, has found it necessary to increase its staff, and has done so by increasing the number of Sanitary Inspecting Physicians who make domiciliary visits, not only for the purpose of discovering the sick, but also to report on the sanitary installations in the different places which serve as a more or less permanent dwelling to a great number of individuals.

A special service has been organized of non-medical inspectors, whose duty it will be to execute the orders which may be issued by the Sanitary Authorities.

Special instructions have been issued for the use of the medical and non-medical inspectors, the food and drink inspectors, the veterinarians who are charged with the supervision of the slaughter houses, butcher shops and dairies, and all other branches of Sanitary Police.

An increase has also been made in the Staff of the Sanitary Engineers, who are consulted by the Medical Inspectors. An increase has likewise been made in the Staff of the Disinfecting Department, which not only will disinfect the places in which sick people or suspected people are found, but also whitewash the dwelling of the poor after the disinfection is made, and provide the persons who attend sick individuals, with new and disinfected clothing in place of that which was worn during their attendance on the patient.

Those persons, after being bathed and disinfected, are taken to houses of detention which have been provisionally established in the four cardinal points of the city, so as to lodge them whilst their dwellings are being disinfected and whitewashed.

In order to avoid crowding, only the persons who can live there with the sufficient quantity of air, are allowed to return to the dwellings originally occupied by the sick, after the rooms have been disinfected and whitewashed, and the rest of them are left, in the houses of detention, under the charge of the Charity Boards which already exist in the city.

As the public services in this city are under the charge of the Public Works Office, that Department has assumed the care of the springs of drinking water, so as to prevent, under the provisions of Art. 338 of the Sanitary Code, the contamination of those springs or of the water cisterns, by the dejecta which may contain the cholera germ. The same office is charged with the supervision of the water supply system, the sewer system of the city, which is constantly kept clean by flushing with water that is pumped in from the pumps at the head of the Calzada de la Piedad.

It is also charged with street sweeping, incineration of the garbage, super-

vision of the cemeteries and in combination with the Board of Health it takes the necessary precautions in the transportation of dead bodies; it specifies the cemeteries and points therein, where such bodies are to be buried, and orders the destruction of these bodies by cremation whenever possible.

As the plant to bring pure water from Xochimilco is not as yet completed, the Public Works Office is taking water to the districts which have none, and a study is being made of the way to supply the water after boiling. As the sewer system is not yet complete, steps are being taken to give the best possible service for the removal of the excrementitious matters, in those parts of the city which are not reached by the sewers.

With the resources at its disposal, the District Government will undertake to enforce compliance with the provisions above mentioned, by means of the police.

The Department of the Interior has been requested to address the War Department through the channel of the Special Office existing in that Department and the instruction hospital, to charge itself directly with the cleaning of the barracks and other places where the garrison has to render service, as well as the destruction of the cholera germs in the excrementitious matters that proceed from those localities, and also to give the soldiers instruction in the precepts of individual hygiene, so that each one may understand how to defend himself against the epidemic.

Through the same channel of the Department of the Interior, a request has been addressed to that of Public Education, to make efforts to avoid the propagation of cholera in all the educational establishments which are subordinate to this Department, by means of its school hygienic service. A request has also been made for the assistance of the institutions which depend on that Department, such as the National Medical Institute, the Bacteriological Institute and the Anatomo-Pathological Institute, in order that these important institutions may afford the assistance within their power; the Bacteriological Institute furnishing, as it has hitherto done, the anticholera vaccine, the material necessary for the rapid discovery of the cholera germ in the dejecta, and in the event of the disease making its appearance in the city, by making the bacteriological diagnosis in the excreta which may be forwarded by the physicians near that institute. The Anatomo-Pathological Institute will also contribute by associating itself with the physicians of the hospitals, in the study of the dead bodies of cholera patients, and lastly, the National Medical Institute will assist by discovering the cholera germ in the excreta which may be forwarded by the physicians who attend patients in places near the Institute.

The same Department of the Interior has been requested to reserve a sufficient number of wards in the General Hospital, in which to attend patients who suffer from confirmed cases of cholera, and another to be

occupied by convalescents. As regards suspects, there is a service already organized for that purpose which will be extended if found necessary.

The same wards have been applied for in the Juarez Hospital, as well as the erection of special sheds if the requirements of the service should make them indispensable. Furthermore, a request has been made that each hospital be equipped, with bacteriological service, if it does not already exist, which will be devoted to making a prompt diagnosis of patients who are suspected of suffering from cholera.

As the Board of Health has a right to promote the organization of Charity Boards in cases of epidemic, it has been thought best to come to an understanding with those already existing, so as to obtain their valuable assistance in the relief of the unfortunate.

A Special Committee of the Board of Health is now deliberating on the request which will be addressed to the Medical Profession, on the necessity of their giving the Board notice of the patients they attend, whether suspected or confirmed cholera cases, and within the shortest possible time. As soon as the Department agrees to lend the services of the Institutes above mentioned, in making a prompt diagnosis of the disease, these physicians will be notified of the place where they can apply for such bacteriological examinations.

Another Committee is studying the way and means to come to an understanding with the wholesale and retail druggists, so as to know what services they will be able to render for the rapid supply of medicines, so that the patients may be attended without loss of time.

As the city contains many industrial or mercantile establishments which employ a great number of persons, most of those establishments have been requested to state, the manner in which they can contribute to the assistance of the sick amongst their own staffs or of their families who may suffer privations through the sickness of the persons who maintain them. Similar enquiries have been sent to the Railroad companies, both national and foreign, and a greater part have already reported to the Board on the resources at their disposal and have generously offered to co-operate with the Sanitary Authorities, in the struggle against the spread of the disease, and in the attendance of the persons attacked. If we have the good fortune of not seeing the cholera reach the capital city, the work undertaken for the assistance of the Sanitary Authorities will not be in vain, as the publication of the doctrine of the disease and of the measures which must be taken for defense against it, is always useful. But if unfortunately we should find ourselves invaded by that terrible epidemic, having our preparations made for defense with due anticipation, and before the multitude is carried away by fright, that defense will be better organized.